



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,544	03/25/2004	Hirofumi Higuchi	11-241	4884
23400	7590	02/28/2005	EXAMINER	
POSZ & BETHARDS, PLC 11250 ROGER BACON DRIVE SUITE 10 RESTON, VA 20190			KWOK, HELEN C	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,544

Applicant(s)

HIGUCHI, HIROFUMI

Examiner

Helen C. Kwok

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/25/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In Figures 1 and 2, reference numeral "21" (used to denote one of the vibrators as described in the specification) is not illustrated in these figures.

Specification

3. The disclosure is objected to because of the following informalities. Appropriate correction is required.

On page 1, line 33, the phrase "beams 21" should be changed to -- beams 12 --.

On page 2, line 16, the word "vibratos" should be changed to -- vibrators --.

On page 2, line 21, reference numeral "12" should be changed to -- 21 --.

On page 7, line 4, reference numeral "12" should be changed to -- 21 --.

On page 7, line 7, reference numeral "12" should be changed to -- 21 --.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9, the phrase "the two driving signals" lacks antecedent basis. Also, in line 4, it appears the word -- a -- should be inserted before the word "signal".

In claim 2, line 8, the phrase "the gap forming a capacitance a change of" is not clearly worded.

In claim 4, lines 2-3, the phrase "the signal from each of the pair of monitoring electrodes" lacks antecedent basis and is vague. There is no mentioning of signal or signals outputted by the pair of monitoring electrodes. Please clarify. In line 8, the phrase "the two driving signals" lacks antecedent basis.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Figure 1 labelled as "Prior Art" of the instant Application.

Figure 1 suggests a monitoring electrode 13 monitoring a vibration of one of the two vibrators 11,21 (in this case, monitoring vibrator 11) to output a signal indicative of the monitored vibration; a signal processor (i.e. the circuitries 30,31,32) configured to drive the two vibrators in opposite phased by using the signal from the monitoring

Art Unit: 2856

electrode; and a driving electrode 15,25 attached to both of the two vibrators for driving both of the vibrators on the basis of the two driving signals. Furthermore, each of the vibrators has a plurality of movable electrode 14,15,24,25 protruding from both sides of each vibrator; a pair of monitoring electrodes 13 disposed in opposition to the movable electrodes on both sides of at least one of the two vibrators are electrically connected to the signal processor; the other one of the two vibrators has a second pair of monitoring electrodes 23 on both sides of the vibrator electrically connected to the signal processor; a differential amplifier 32 receiving the signal from each of the pair of monitoring electrodes; a self-energizing oscillator 30 and an inverter 31. (As observed in Figure 1 and as described on pages 1 and 2 of the present Application).

8. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by either U.S. Patent 6,666,091 (Hatanaka et al.) or U.S. Patent 6,705,151 (Nozoe et al.). [Note: the first reference numeral corresponds with Hatanaka et al. and the second reference numeral corresponds with Nozoe et al., separated by a semicolon].

The references, Hatanaka et al. and Nozoe et al., disclose a monitoring electrode (4; 42) monitoring a vibration of one of the two vibrators (10a,10b; each tine of the tuning fork) to output a signal indicative of the monitored vibration; a signal processor (the circuitries 40-43; the circuitries 15-16) configured to drive the two vibrators in opposite phased by using the signal from the monitoring electrode; and a driving electrode 1,2; 46,47) attached to both of the two vibrators for driving both of the vibrators on the basis of the two driving signals. (See, Figure 4, column 3, line 40 to

column 7, line 14 of Hatanaka et al.; Figures 20a-20c, column 10, line 11 to column 11, line 41 of Nozoe et al.).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Helen C. Kwok
Art Unit 2856

hck
February 16, 2005